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THE EFFECTS OF SARSAPONIN AND BACITRACIN MD ON PERFORMANCE OF GROWING-FINISHING PIGS

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Feed additives have been used to promote growth and feed efficiency of growing-finishing pigs for over 30 years. Typically, greatest response is found during early stages of growth and less response during the finishing period under conditions of good management. Recently, sarsaponin, a naturally occurring plant steroid derived from the yucca plant, has become available as a feed additive under the commercial name, Micro-Aid. Claims for this product include increased performance of pigs during the finishing period. The antibiotic, Bacitracin MD, also has been shown to improve performance during later stages of growth more than is expected of most feed additives.

The study reported herein was designed to evaluate the response of pigs to these two feed additives when fed separately or in combination.

Experimental Procedure

One hundred twenty crossbred feeder pigs from one source were randomly allotted to the four treatment groups on the basis of sex and weight. Each pen consisted of three barrows and three gilts. Experimental treatments were as follows:

1. Bacitracin MD (40 g/ton)
2. Micro-Aid (2 oz/ton) + Bacitracin MD (40 g/ton)
3. Control
4. Micro-Aid (2 oz/ton)

Starting weights for the five replications of the four treatments averaged 68.8, 63.2, 58.2, 54.2 and 49.3 lb for replications one through five, respectively. All replications were started on test the same day, November 17, 1982. The experiment was terminated by pen when average pen weight reached 225 lb on the weekly weigh day. Termination dates were between February 16 and March 18, 1983. Diets contained 16 and 14% protein during the growing and finishing period, respectively. Pigs were owned by and feed supplied by Farmers Cooperative Society of Sioux Center, IA who were cooperators on the study. Micro-Aid and financial support were provided by Distributors Processing, Inc. who manufacture Micro-Aid. Pigs were provided 10 sq ft of pen space and were housed in the environment-modified confinement barn at the Southeast South Dakota Experiment Farm at Beresford, South Dakota.

Results and Discussion

The results of the trial are shown in table 1. No significant differences among treatments were observed. It is interesting to note that the slowest gains were observed for pigs receiving no feed additive during both the growing and the finishing periods. However, this difference is not significant. Performance of all pens was good, averaging over 1.6 lb gain/day. Typically, little response to feed additives is observed when performance of the pigs is at a high level.

Feed consumption varied between pens and treatments but was not consistantly associated with treatments. Feed per unit of gain was unaffected by experimental treatment.

Table 1. Effect of Bacitracin MD and Micro-Aid on Performance of Growing-Finishing Pigs

Bacitracin MD	+	+	-	-
Micro-Aid	-	+	-	+
Pig Weights, lb				
Start	58.8	58.5	58.9	58.8
Mid	126.1	127.1	133.6	130.1
End	228.9	231.2	229.3	229.2
Average Daily Gain, lb				
Grower	1.65	1.60	1.57	1.61
Finisher	1.64	1.63	1.55	1.65
Overall	1.64	1.62	1.56	1.63
Average Daily Feed, lb				
Grower	5.02	4.88	4.65	4.75
Finisher	6.15	6.60	6.32	7.08
Overall	5.67	5.92	5.60	6.06
Feed/Gain				
Grower	3.04	3.05	2.96	2.95
Finisher	3.75	4.05	4.08	4.29
Overall	3.46	3.65	3.59	3.72

Summary

A total of 120 feeder pigs were used in this experiment to study the effect on pig performance of feeding diets containing 40 g/ton of Bacitracin MD, 2 g/ton of Micro-Aid or the combination of these two additives in swine feed.

Under the conditions of this experiment with above average performance and management, no advantage was observed for including either Micro-Aid or Bacitracin MD in the diets of growing-finishing pigs.